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# *Economic Dispatch: A PE Perspective*

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# *The Time Horizons*

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- Portfolio Management – Years ahead
  - ◆ For Duke Power, Integrated Resource Planning
- Resource Commitment – Days/Hours ahead
  - ◆ Sometimes called “Unit Commitment”
  - ◆ For Duke Power, conduct on at least a daily basis an analysis looking at the next seven days
- Economic Dispatch – Real (and near real) time

While the time horizons are different, these processes work together to provide the means to meet customer demand at the lowest possible cost subject to operational limitations and reliability considerations.

# *Constraints*

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- ➔ Operational constraints might include items like:
  - ◆ Ramp rates
  - ◆ Minimum run times
  - ◆ Unit start up times
  - ◆ Emission limits
  - ◆ Planned maintenance schedules
  - ◆ Hydro/Pump Storage reservoir limitations
- ➔ Security Constrained Economic Dispatch
  - ◆ An economic dispatch is modified to ensure that the transmission system can accommodate the generation dispatch in a reliable manner.

## *Third Party Resources*

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- Third party resources are continuously evaluated for inclusion in the Resource Commitment and Dispatch processes.
- Duke's performance of these activities is subject to state regulatory review.
- Merchant function evaluation places equal weight on purchase savings and sale profits.